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| . Marias "   | 92.28.2.3.2 | Richard B. Ptalips   | X ( ) X <sup>5</sup> | 7:12                      |
| ٠,   |             |                      |                      |                           |
| Office Of Counsel, Bldg 112 f<br>Naval Undersea Warfare Center<br>Division Newport<br>1176 Howell Street<br>Newport, RT - 02841-1708 |             |                      | EX AMENER            |                           |
|  |             |                      | TOOMER, CEPHIAD      |                           |
|  |             |                      | VST - ML             | EAPER NI MHÈR             |

DATE STATE OF STATE

Please find below and or attached an Office communication concerning this application or proceeding.

## Application No.

Applicant(s)

10 090,987

PHILIPS ET AL

## Office Action Summary

Examiner

Art Unit

Cephia D. Toomer

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

| Period fo                          | for Reply   |  |
|------------------------------------|---|--|
| THE No. 2 External after solutions | HORTENED STATUTORY PERIOD FOR REPLY EMAILING DATE OF THIS COMMUNICATION. densions of the end, threater able under the processors of an OFR in the end in the EMONTHS from the maining date of this communication the behold for reply specified above is less than thirt, (a), (days large).  | Early indievent inclueven may areply be timely fixed.  when the statutory minimum of thirty includys will be considered time . |
| Falo<br>Arji                       | No per od fortebly, is specified above, the man mum Statutor's period will<br>flure to reply within the set milext-inded period for reply will by statute<br>ly reply reviewed by the Officer afer than three mounts saffer the mainty<br>medicipater thermiad ustment. See: 30 OFR 1.51.4 to |  |
| Status                             |   |  |
| 1)                                 | Responsive to communication(s) filed on   | _ ·  |
| 2a)                                | This action is <b>FINAL</b> 2b)⊡ This   | s action is non-final.   |
| 3) 🗌                               | Since this application is in condition for allowar closed in accordance with the practice under Eition of Claims  | nce except for formal matters, prosecution as to the merits is a parte Quayle. 1935 C.D. 11, 453 O.G. 213.                     |
| ·                                  |   |  |
|                                    | Claim(s) <u>1-16</u> is/are pending in the application.   | n from consideration   |
|                                    | 4a) Of the above claim(s) is/are withdraw   | n from consideration.  |
|                                    | Claim(s) is/are allowed.  |  |
|                                    |   |  |
|                                    |   |  |
|                                    | Claim(s) are subject to restriction and/or ation Papers   | election requirement.  |
|                                    |   |  |
|                                    | The specification is objected to by the Examiner.   |  |
| 10)[_] 1                           | The drawing(s) fi.ed on is/are: a) accept   |  |
| 111                                |   | drawing(s) be held in abeyance. See 37 CFR 1.85(a).  |
| ' ' );; '                          | If approved, corrected drawings are required in repl  | is: a) approved b) disapproved by the Examiner.  |
| 12)                                | The oath or declaration is objected to by the Exa   |  |
|                                    | , ,   | THILE :  |
|                                    | under 35 U.S.C. §§ 119 and 120  | 25 11 0 0 5 440 - 2 (1)  |
|                                    | Acknowledgment is made of a claim for foreign   | priority under 35 U.S.C. § 119(a)-(d) or (f).  |
|                                    | a) All b) Some c) None of:  |  |
|                                    | 1 Certified copies of the priority documents  |  |
|                                    |   | have been received in Application No   |
|                                    | 3. Copies of the certified copies of the priori application from the International Bure See the attached detailed Office action for a list of   |  |
| 14)[] A                            | Acknowledgment is made of a claim for domestic  | priority under 35 U.S.C. § 119(e) (to a provisional application  |
|                                    | a) [ The translation of the foreign language prov<br>Acknowledgment is made of a claim for domestic   |  |
| ttachment                          | •   |  |
|                                    | t with Referencies Ones 150 met   | 4 (interces Supremary PT 7413 Paper Nus  |

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#### **DETAILED ACTION**

### Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

## Claim Rejections - 35 USC § 103

- 2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made
- 3. Claims 1, 6, 7, and 12-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Costa (US 6,464,148).

Costa teaches a snowmaking process wherein 2-50 ppm of a organopolysiloxane is present in water that is made into artificial snow (see abstract; col. 6, lines 43-65; col. 7, lines 20-23). Costa teaches that the siloxane/water mixture is fed continuously under high pressure to at least one orifice of a snow gun. The mixture is released into the atmosphere at a temperature below freezing whereby the mixture crystallizes to form snow. Costa teaches the limitations of the claims other than the differences that are discussed below.

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Costa fails to specifically teach aerating the mixture However, it would be reasonable to expect that aeration occurs when the mixture is sprayed or discharged from the snow gun.

Costa fails to teach that a pump is joined to the mixing means or that a fluid transfer line is joined to the pump. However, it would be reasonable to expect that these components would be part of a snow making system because the polymer/water mixture has to be transferred or pumped from the mixing means to the orifice or nozzle that discharges the mixture into the atmosphere. The limitations that refer to the compress air are disclosed in Costa as conventional means for a snow making system (see col. 1, lines 36-44).

4. Claims 2-5 and 8-11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach or suggest that the drag polymer is polyethylene oxide in a carrier solution.

The prior art made of record but not relied upon is cited for teaching the general state of the snow making art and is considered pertinent to Applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 703-308-2509. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

Cephia D. Toomer Primary Examiner Art Unit 1714

10090987\2 June 17, 2003

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